

Remarks

This Amendment is filed along with a Request for Continued Examination.

Claims 1-20 are pending in the present application. Claims 1-16 and 18-20 are rejected. Claim 15 is objected to.

Claim 16 is cancelled.

Claim 17 is withdrawn from consideration.

New Claim 21 is presented for examination. This claim represents claim 16 written in independent form.

Independent claim 1 is amended to include the following limitation of claim 16: "wherein the first and second catalysts are closely coupled, the first catalyst being placed in a forward position and the second catalyst being placed in a downstream position in the exhaust stream." Claim 18 is amended in an analogous manner to include the limitation: "the catalyst being positionable in a forward position in the exhaust relative to a second catalyst for optimizing the reduction of hydrocarbon, NO_x and CO emissions under stoichiometric air/fuel ratios, the second catalyst comprising a catalyst mixture PM-Rh where PM is a catalyst material selected from the group consisting of platinum, palladium and combinations thereof." Claims 4 and 5 are amended to removed the word "between" as suggested by the Examiner.

1. Rejection under 35 U.S.C. §112

Claims 4-5 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4-5 are amended to remove the word "between" as suggested by the Examiner to overcome this rejection.

2. Rejection under 35 U.S.C. §102 (b)

Claims 1-3, 6, 16, and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Evans et al.

Claim 1 is amended to include the limitation of claim 16 that the first and second catalysts are closely coupled and that the first catalyst (i.e., the catalyst a Perovskite-type ABO_3 crystal structure) is placed in a forward position and the second catalyst (i.e., the catalyst comprising a catalyst mixture PM-Rh) is placed in a downstream position in the exhaust stream. Claim 18 is amended in an analogous manner requiring the Perovskite containing catalyst be positionable in a forward position relative to the PM-Rh containing catalyst. Evan et al. does not disclose such a configuration.

Applicants respectfully assert that the Examiner has misinterpreted the teachings of Evans et al. regarding the limitations of claim 16 which have now been incorporated into claim 1. Regarding claim 16, the Examiner states in a somewhat conclusory manner:

The catalyst arrangement taught by the reference meets the arrangement required by claim 16.

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A careful review of Evans et al. reveals that a configuration in which a catalyst comprising a catalyst mixture PM-Rh is placed downstream of a catalyst having Perovskite-type ABO_3 crystal structure is **not** provided. Instead, Evans et al. teaches the utilization of a perovskite-type catalyst to improve the performance of other catalysts (such as catalysts that include Rh and precious metals) by combination with these other catalysts. For Example, Evans states:

We have found that the performance of a catalyst according to the invention of the indicated U.S. application is, at least under certain circumstances, improved if the catalyst is supported on a wash-coat and the wash-coat is impregnated with, or, within the washcoat there is dispersed, at least part of the base metal of the catalyst.

Evans et al., col. 2, l. 67 - col. 3, l. 5

This analysis is further supported by the examples in Evans et al. For example, in Example 1 both the Perovskite layer and the PM-Rh containing component are coated onto a single substrate without the upstream-downstream relation required by independent claims 1 and 18.

Accordingly, independent claims 1 and 18 and their dependent claims 2-3, 6, 16, and 19-20 are patentable over Evans et al. under 35 U.S.C. §102(b).

3. Rejection under 35 U.S.C. §103

Claims 4-5 and 7-10 are rejected under 35 U.S.C. §103(a) as being unpatentable over Evans et al. as applied above for claims 1-3, 6, 16, and 18-20.

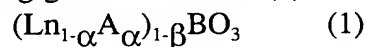
As set forth above, independent claim 1 from which claims 4-5 and 7-10 depend is amended to include the limitations of claim 16 which is patentable over Evans et al. Moreover, this rejection does not involve claim 16. Accordingly, claims 4-5 and 7-10 are patentable over Evans et al. under 35 U.S.C. 103(a).

Claims 1-7, 11-14, 16, and 18-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over EP 0 941 757.

Applicant respectfully traverses this rejection for reasons similar to those set forth above for Evans et al. EP 0 941 757 does not teach a configuration in which a catalyst comprising a catalyst mixture PM-Rh is placed downstream of a catalyst having Perovskite-type ABO_3 crystal structure as required by independent claim 1. Similarly, EP 0

941 757 does not teach a Perovskite containing catalyst that is positionable in a forward position relative to a PM-Rh containing catalyst are required by independent claim 18. EP 0 941 757 discloses a catalyst in which the perovskite component and the PH-Rh components are combined into a single catalyst. Specifically, EP 0 941 757 states:

According to the present invention, there is provided a device for purifying an exhaust gas. This device comprises a first catalyst for purifying NOx of the exhaust gas. This first catalyst comprises first and second powders. The first powder comprises a porous carrier and at least one noble metal loaded on the porous carrier. The at least one noble metal is selected from the group consisting of platinum, palladium and rhodium. The second powder comprises a first double oxide represented by the following general formula (1):



EP 0 941 757, p. 2, l. 30-36

The second catalyst of EP 0 941 757 is a completely different catalyst than those taught in the present invention. Specifically, it is a sulfur oxide absorbing catalyst that is placed upstream of the Perovskite containing catalyst. (EP 0 941 757, p. 5, ll. 15-26. In the present invention, the second catalyst is not sulfur oxide absorbing and is placed downstream of the Perovskite containing catalyst. For these reasons, independent claims 1 and 18 along with dependent claims 2-7, 11-14 and 19-20 are patentable over EPO 941 757.

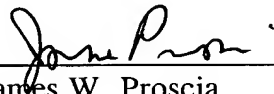
Conclusion

Applicants have made a genuine effort to respond to each of the Examiner's rejections in advancing the prosecution of this case. Applicants believe that all formal and substantive requirements for patentability have been met and that this case is in condition for allowance, which action is respectfully requested. If a telephone or video conference would

help expedite allowance or resolve any additional questions, such a conference is invited at the Examiner's convenience.

The Commissioner is authorized to charge any additional fees or credit any overpayments as a result of the filing of this paper to Ford Global Technologies, LLC Deposit Account No. 06-1510.

Respectfully submitted,
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